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UNITED STATES PATENT AND TRADEMARK OFFICE

# CERTIFICATE OF CORRECTION

PATENT NO.:

7939526 BV

Page 1 of 7

DATED:

10-MAY-2011

FIRST NAMED INVENTOR:

Radmer, Matt R , e + al .

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### List of References

- Page 1, Col. 2 (Other Publications), Lines 4-6 After "1983." delete "Brennan at al.,
  "Automated Bioassay of Interferons in Micro-test Plates.", Biotechniques, Jun./Jul., 78, 1983."
  and insert the same on First Page, Col. 2, Line 5, as a new entry.
- Page 1, Col. 2(Other Publications), Line 4 Delete "at al." and insert - et al. -, therefor.
- Page 2, Col. 1(Other Publications), Line 4 Delete "Rice et al." and insert Coleman, et al. --, therefor.

#### Specification

- Col. 5, Line 7 Delete " $-(O)_2$ -;" and insert  $-S(O)_2$ -; -, therefor.
- Col. 7. Line 63 Delete "-(O)<sub>2</sub>-;" and insert -  $S(O)_2$ -; --, therefor.
- Col. 13, Line 42 Delete "alynyl," and insert - alkynyl, , therefor.
- Col. 21, Line 15 Delete "- $(O)_2$ -;" and insert -S $(O)_2$ -; --, therefor.]
- Col. 25, Line 8 Before "alkoxy," delete "to".
- Col. 29, Line 9 Delete "allyl," and insert - alkyl, -, therefor.
- Col. 29, Line 41 Delete " $-(O)_2$ -;" and insert -  $-S(O)_2$ -; -, therefor.
- Col. 29, Line 62 Delete "C<sub>1-10</sub>" and insert - C<sub>4-10</sub> -, therefor.

MAILING ADDRESS OF SENDER:

PATENT NO. 7939526

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Page 2 of 7

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### CERTIFICATE OF CORRECTION

PATENT NO.:

7939526 BV

DATED:

10-MAY-2011

FIRST NAMED INVENTOR:

Radmer, Matt R , et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### Specification Cont'd

- Col. 30, Line 13 Below "consisting of:" insert - -(0)-; --.
- Col. 31, Line 21 Delete "substitutent." and insert - substituent. -, therefor.
- Col. 35, Line 67 After "of" insert - -(O)-, -.
- Col. 36, Line 67 Delete "oxo.-" and insert - oxo. -, therefor.
- Col. 37, Line 39 After "Ia," insert - II, -.
- Col. 38, Line 55 Delete "VI." and insert - VIII. -, therefor.
- Col. 39, Line 8 Delete "L" and insert - I, --, therefor.

MAILING ADDRESS OF SENDER:

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### CERTIFICATE OF CORRECTION

PATENT NO.:

7,939526 B2

Page 3 of 7

DATED:

10-MAY-2011

FIRST NAMED INVENTOR:

Radmer, Matt R ,  $e + \mathcal{U}$  ,

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

#### Specification Cont'd

• Col. 39, Line 16 to Col. 40 Line 9 — Delete "In step (4b) an N-oxide of Formula IX is aminated to provide a lH-imidazo[4,5-c]quinolin-4-amine of Formula IIa-l, which is a subgenus of Formula I, la, II, IIa, and IIb. The reaction is carried out in two parts. In part (i) a compound of Formula IX is reacted with an acylating agent. Suitable acylating agents include alkyl- or arylsulfonyl chorides (e.g., benesulfonyl chloride). In part (ii) the product of part (i) is reacted with an excess of an aminating agent. Suitable animenzenesulfonyl choride, methanesulfonyl choride, or p-toluating agents include ammonia (e.g. in the form of ammonium hydroxide) and ammonium salts (e.g., ammonium carenesulfonyl chloride). In part (ii) the product of part (i) is reacted with an excess of an aminating agent. Suitable animbonate, ammonium bicarbonate, ammonium phosphate). The reaction can be carried out by dissolving a compound of Formula IX in a suitable solvent such as dichloromethane or chlorofonn, adding ammonium hydroxide to the solution, and then adding p-toluenesulfonyl chloride. The product or a pharmaceutically acceptable salt thereof can be isolated using conventional methods."

and insert - In step (4b) an N-oxide of Formula IX is aminated to provide a 1*H*-imidazo[4,5-c]quinolin-4-amine of Formula IIa-1, which is a subgenus of Formulas I, Ia, II, IIa, and IIb. The reaction is carried out in two parts. In part (i) a compound of Formula IX is reacted with an acylating agent. Suitable acylating agents include alkyl- or arylsulfonyl chlorides (e.g., benzenesulfonyl chloride, methanesulfonyl chloride, or p-toluenesulfonyl chloride). In part (ii) the product of part (i) is reacted with an excess of an aminating agent. Suitable aminating agents include ammonia (e.g. in the form of ammonium hydroxide) and ammonium salts (e.g., aminonium carbonate, ammonium bicarbonate, ammonium phosphate). The reaction can be carried out by dissolving a compound of Formula IX in a suitable solvent such as dichloromethane or chloroform, adding ammonium hydroxide to the solution, and then adding p-toluenesulfonyl chloride. The product or a pharmaceutically acceptable salt thereof can be isolated using conventional methods. - -, therefor.

MAILING ADDRESS OF SENDER:

PATENT NO. 7939526

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## CERTIFICATE OF CORRECTION

PATENT NO.:

Page 4 of 7

DATED:

10-MAY-2011

FIRST NAMED INVENTOR:

Radmer, Matt R ,

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### Specification Cont'd

- Col. 41, Line 1 Delete "4 amines" and insert - 4-amines -, therefor.
- Col. 42, Line 63 Delete "substitutents." and insert - substituents. -, therefor.
- Col. 44, Line 11 Delete "hydroxpropoxy" and insert - hydroxypropoxy -, therefor.
- Col. 44, Line 29 Delete "XXI." and insert - XXII. --, therefor.
- Col. 44, Line 48 Delete "XXV" and insert - XXIV -, therefor.

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PATENT NO. 7939526

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## CERTIFICATE OF CORRECTION

PATENT NO.:

7,939,526 BL

DATED:

10-MAY-2011

FIRST NAMED INVENTOR:

Radmer, Matt R, etal.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### Specification Cont'd

- Col. 51, Line 10 Delete "VII" and insert -- I --, therefor.
- Col. 55, Line 32 Delete "papillomavirises," and insert - papillomaviruses, -, therefor.
- Col. 55, Line 58 Delete "myelogeous" and insert - myelogenous -, therefor.
- Col. 55, Line 67 Delete "greata;" and insert - areata; -, therefor. .
- Col. 56, Line 18 Delete "hemophilus" and insert - haemophilus -, therefor.
- Col. 59, Line 39 Delete "(72 μL)." and insert - (72 mL). -, therefor.
- Col. 59, Lines 61 Delete "(50 ml)," and insert - (50 mL), -, therefor.
- Col. 61, Line 8 Delete "S. 0.25" and insert - S.0.25 -, therefor.
- Col. 63, Line 3 Delete "(M+1)\*;" and insert - (M+H)\* -, therefor.
- Col. 66, Line 4 Delete "60%" and insert - ~60% -, therefor.
- Col. 68, Line 13 Delete "(M+" and insert - (M+H); -, therefor.
- Col. 70, Line 56 Delete "[(3-nitroquinolinyl)" and insert - [(3-nitroquinolin-4-yl) -, therefor.

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## CERTIFICATE OF CORRECTION

PATENT NO.:

7939526

Page 6 of 7

DATED:

10-MAY-2011

FIRST NAMED INVENTOR:

Radmer, Matt R, etal.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

#### Specification Cont'd

- Col. 73, Line 34 After "13.39" insert -- . --.
- Col. 75, Lines 28-35 Delete "mp 150.0-151.0° C. <sup>1</sup>H NMR (300 MHz, DMSO)  $\delta$  8.72 (d, J=4.7 Hz, 1H), 8.13 (t, J=7.8 Hz, 1H), 7.97-8.01 (m, 2H), 7.71-7.73 (m, 1H), 7.58 (d, J=7.3 Hz, 1H), 7.37 (t, J=8.2 Hz, 1H), 7.17 (t, J=7.0 Hz, 1H), 6.38 (s, 2H), 4.67 (t, J=5.2 Hz, 2H), 3.76 (t, J=5.2 Hz, 2H), 3.28-3.38 (m, 4H), 2.86 (t, J=7.6 Hz, 2H), 1.82 (apparent hextet, J=7.6, 7.4, 7.3 Hz, 2H), 1.69-1.71 (m, 2H), 0.99 (t, J=7.4 Hz, 3H); MS (APCI) m/z 454 (M+H)<sup>†</sup>; Anal. calcd for  $C_{23}H_{27}N_5O_3S$ : C, 60.91; H, 6.00; N, 15.44. Found: C, 60.59; H, 5.91; N, 15.32." and insert the same on Col. 75, Line 27, after "powder," as the continuation of the same paragraph.
- Col. 75, Line 61 Delete "3.5g" and insert -- ~3.5g --, therefor.
- Col. 76, Line 9 Delete "[3-(ethylsulfinyl)" and insert - [3-(Methylsulfinyl) -, therefor.
- Col. 76, Line 43 Delete "pentet," and insert - (pentet, -, therefor.
- Col. 83, Line 46 Delete "(M+H);" and insert -- (M+H); --, therefor.
- Col. 84, Lines 34 Delete "quinolin amine" and insert - quinolin-4-amine -, therefor.
- Col. 91, Line 63 Delete "3.60," and insert -- 3.60 --, therefor.
- Col. 91, Line 67 Delete "(M+H);" and insert -- (M+H)+; --, therefor.

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## **CERTIFICATE OF CORRECTION**

PATENT NO.:

7939526 BL

Page 7 of 7

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10-MAY-2011

FIRST NAMED INVENTOR:

Radmer, Matt R, E+ al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

### Specification Cont'd

- Col. 92, Line 29 After "Russ." delete "i".
- Col. 100, Line 23 Delete "41~48" and insert - 41-48 -, therefor.
- Col. 101, Line 2 Delete "Examples" and insert - The examples -, therefor.
- Col. 101, Lines 56-60 Delete " methyethyl " and insert - methylethyl -, therefor.
- Col. 102, Lines 23-28 Delete "methyethyl" and insert -- methylethyl --, therefor.
- Col. 102, Lines 42-47 Delete "methyethyl" and insert -- methylethyl --, therefor.
- Col. 102, Lines 62-66 Delete "methyethyl" and insert - methylethyl -, therefor.

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